

# Pranjal Sahu

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CONTACT INFORMATION	<a href="mailto:psahu@cs.stonybrook.edu">psahu@cs.stonybrook.edu</a> <a href="https://pranjalsahu.github.io/home/">pranjalsahu.github.io/home/</a> <a href="https://stackoverflow.com/users/907770">stackoverflow.com/users/907770</a>	(631)-590-0490 <a href="https://github.com/PranjalSahu">github.com/PranjalSahu</a> <a href="#">Google Scholar</a>
INTERESTS	Machine Learning, Computer Vision, Medical Imaging.	
EDUCATION	<b>Ph.D. in Computer Science, Stony Brook University, 2021</b> Thesis: Novel Machine-Learning-Centric Data Synthesis Algorithms and Analysis Techniques for Medical Imaging. Advisor: Dr. H. Qin  <b>Indian Institute of Technology Kharagpur</b> B.Tech.(Hons) in Computer Science and Engineering, 2013	
SKILLS	Python, C++, C, Matlab, Pytorch, Keras, Tensorflow, OpenCV, Numpy, Sklearn, Android Development, Ruby on Rails, PostgreSQL, Dask, Spark, Git	
WORK EXPERIENCE	<b>Siemens Healthineers</b> , Senior Deep Learning Scientist - Medical Image Analysis, Princeton, NJ, USA, (February 2023 - current) Deep Learning for abnormality detection in Chest X-Rays.  <b>Kitware</b> , Senior R&D Engineer, Carrboro, NC, USA. (June 2021 - February 2023) Deep learning applications in medical imaging ex. volume segmentation (Monai), point-set registration (ITK, VTK), Dask support for ITK data structures like meshes, images.	
INTERNSHIPS	<b>Siemens Healthineers</b> , Malvern, PA. (2020) Segmentation of Lung CT in presence of severe pathologies. Improved recall of Tumor voxels from 0.56 to 0.87 and published the work in J-BHI journal.  <b>Siemens Healthineers</b> , Malvern, PA. (2019) Large lung nodule detection in Siemens Syngo CT CAD.  <b>Brookhaven National Laboratory</b> , Computational Science Initiative (2017) Autonomous Infrastructure for Transition Prediction.	
SELECTED PUBLICATIONS	<b>P. Sahu</b> , V. S. Kumar, H. Qin. <i>Stabilized Semi-Supervised Training for COVID Lesion Segmentation</i> , <b>BMVC</b> , 2021  <b>P. Sahu</b> , H. Huang, W. Zhao, H. Qin. <i>Interactive Smoothing Parameter Optimization in DBT Reconstruction using Deep learning</i> , <b>MICCAI</b> , 2021  <b>P. Sahu</b> , Y. Zhao, P. Bhatia, L. Bogoni, A. Jerebko, H. Qin. <i>Structure Correction for Robust Volume Segmentation in Presence of Tumors</i> , IEEE Journal of Biomedical and Health Informatics, <b>J-BHI</b> , 2020  <b>P. Sahu</b> , D. Yu, M. Dasari, F. Hou and H. Qin. <i>A Lightweight Multi-section CNN for Lung Nodule Classification and Malignancy Estimation</i> , IEEE Journal of Biomedical and Health Informatics, <b>J-BHI</b> , 2018.  <b>P. Sahu</b> , D. Yu and H. Qin. <i>Apply lightweight deep learning on internet of things for low-cost and easy-to-access skin cancer detection</i> , <b>SPIE</b> , 2018 ( <b>Best Demo Award</b> ).	
HONORS AND AWARDS	2018 2016 2005	Best Demo Award in SPIE Medical Imaging Conference Computer Science Chairman Fellowship, Stony Brook University Represented home state in National Children Science Congress
INVITED TALK	<i>Deep Learning applications in Medical Imaging</i> , at Bell labs, Murray Hill (2019).	

OTHER PUBLICATIONS	X. Duan, <b>P. Sahu</b> , et. al, <i>Deep-learning convolutional neural network-based scatter correction for contrast enhanced digital breast tomosynthesis in both cranio-caudal and mediolateral-oblique views</i> , <b>Journal of Medical Imaging (JMI)</b> , 2023.	
	X. Duan, <b>P. Sahu</b> , H. Huang, W. Zhao. <i>Scatter correction with deep learning approach for contrast enhanced digital breast tomosynthesis (CEDBT) in both cranio-caudal (CC) view and mediolateral oblique (MLO) view</i> , <b>IWBI 2020 (Oral)</b> .	
	<b>P. Sahu</b> , H. Huang, W. Zhao, and H. Qin. <i>Using virtual digital breast tomosynthesis for de-noising of low-dose projection images</i> , International Symposium on Biomedical Imaging, <b>ISBI</b> 2019.	
	<b>N. Konz</b> , et. al, <i>A Competition, Benchmark, Code, and Data for Using Artificial Intelligence to Detect Lesions in Digital Breast Tomosynthesis</i> , <b>JAMA Network Open</b> , 2023.	
	<b>P. Sahu</b> , Jared Vicory, et. al, <i>Wavelet Guided 3D Deep Model to improve Dental Microfracture Detection</i> , <b>MICCAI</b> , AMAI Workshop, 2022.	
	<b>P. Sahu</b> , Thomas Hastings Greer, et. al, <i>Reproducible Workflow for Visualization and Analysis of OsteoArthritis Abnormality Progression</i> , <b>QMSKI</b> , 2022.	
	<b>P. Sahu</b> , S. Gerber, Q. Zhao, T. Nguyen, M. McCormick, B. Paniagua and J. Vicory. <i>Thin shell demons for dental scan registration</i> , <b>SPIE</b> , 2022.	
	J. Vicory, <b>P. Sahu</b> , H. Wee, H. Nam, A. Chopra, S. Reid, G. Lewis, S. Arikatla. <i>Automated fractured femur segmentation using CNN</i> , <b>SPIE</b> , 2022.	
	C. Zhan, M. Ghaderibaneh, <b>P. Sahu</b> , H. Gupta. <i>DeepMTL Pro: Deep Learning Based Multiple Transmitter Localization and Power Estimation</i> , <b>Pervasive and Mobile Computing</b> , 2022.	
	M. Dasari, A. Bhattacharya, S. Vargas, <b>P. Sahu</b> , A. Balasubramanian, S. Das. <i>Streaming 360 degree Videos using Super-resolution</i> , IEEE <b>INFOCOM</b> 2020.	
TALKS	<i>Lightweight Deep Learning on Internet of things</i> at SPIE, Houston (2018).	
	<i>Wavelet Guided 3D Deep Model to improve Dental Microfracture Detection</i> at MICCAI AMAI Workshop, Singapore, (2022).	
REVIEWER	<input type="checkbox"/> MICCAI <input type="checkbox"/> Journal of Medical Imaging (JMI) <input type="checkbox"/> Ultrasonics Journal <input type="checkbox"/> Journal of Electronic Imaging <input type="checkbox"/> Journal of Biomedical and Health Informatics (JBHI) <input type="checkbox"/> BMC Pulmonary Medicine	
	<input type="checkbox"/> Medical Physics <input type="checkbox"/> Journal Of Computational Science <input type="checkbox"/> Scientific Reports <input type="checkbox"/> Signal, Image and Video Processing <input type="checkbox"/> Journal of Real-Time Image Processing <input type="checkbox"/> Multimedia Systems	
SERVICE	Mentored Rutwik Palaskar (MIT ADT University, India) under the mentorship program at Machine Learning for Health (ML4H) workshop at NeurIPS 2020 on Oral Cancer detection work using pathology images.	
GRADUATE COURSEWORK	<input type="checkbox"/> Computer Graphics <input type="checkbox"/> Computer Vision <input type="checkbox"/> Convex Optimization	
	<input type="checkbox"/> Artificial Intelligence <input type="checkbox"/> Analysis of Algorithms <input type="checkbox"/> Computer Networks	
EXTRA CURRICULARS	<input type="checkbox"/> Silver medal in Inter Hall Thermocol and clay modelling at IIT Kharagpur <input type="checkbox"/> Member of Azad Hall of Residence Fine Arts team at IIT Kharagpur	